

MMBD914

SURFACE MOUNT SWITCHING DIODE

VOLTAGE 100 Volt **POWER** 225 mWatt

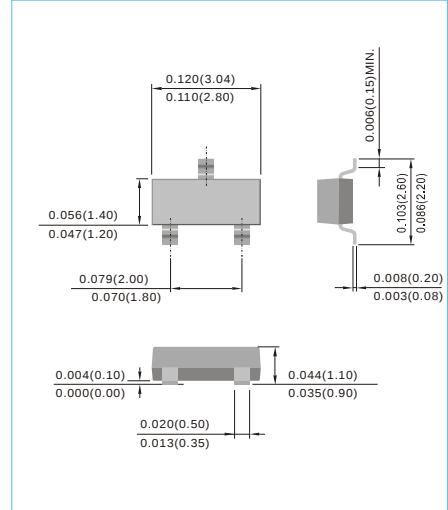
FEATURES

- Very fast reverse recovery ($T_{rr} < 2\text{ns}$ typical)
- Low capacitance (4pF @ 0V typical)
- Surface mount package ideally suited for automatic insertion
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-23 plastic case.
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams
- Marking : T1

SOT-23 Unit : inch(mm)



ABSOLUTE RATINGS

Parameter	Symbol	Value	Unit
Maximum Reverse Voltage	V_R	100	V
Peak Reverse Voltage	V_{RRM}	100	V
Continuous Forward Current	I_F	0.2	A
Non-repetitive Peak Forward Surge Current at $t = 1\mu\text{s}$	I_{FSM}	4	A

THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Power Dissipation (Note 1)	P_{TOT}	225	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Operating Junction And Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^{\circ}\text{C}$

NOTE :

1. FR-5 Board = 1X0.75X0.062 in.

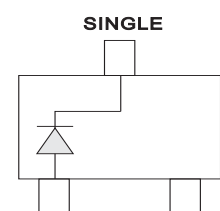
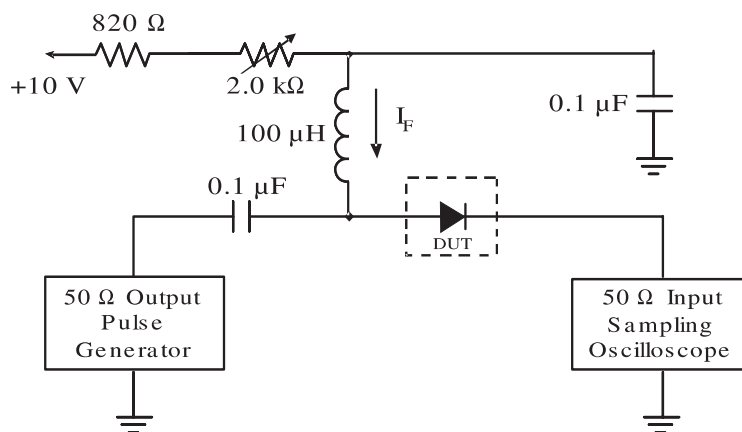


Fig.14

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ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	100	-	-	V
Reverse Current	I_R	$V_R=20\text{V}$ $V_R=75\text{V}$	- -	- -	0.025 5	μA
Forward Voltage	V_F	$I_F=10\text{mA}$	-	-	1	V
Total Capacitance	C_J	$f=1.0\text{MHz}$, $V_R=0\text{V}$	-	-	4	pF
Reverse Recovery Time (Figure 1)	T_{RR}	$I_F=I_R=10\text{mA}$, $R_L=100\Omega$	-	-	4	ns



- Notes:
1. A $2.0\text{k}\Omega$ variable resistor adjusted for a forward current (I_F) to 10mA
 2. Input pulse is adjusted to $I_{R(\text{peak})}$ is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT

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ELECTRICAL CHARACTERISTICS CURVE

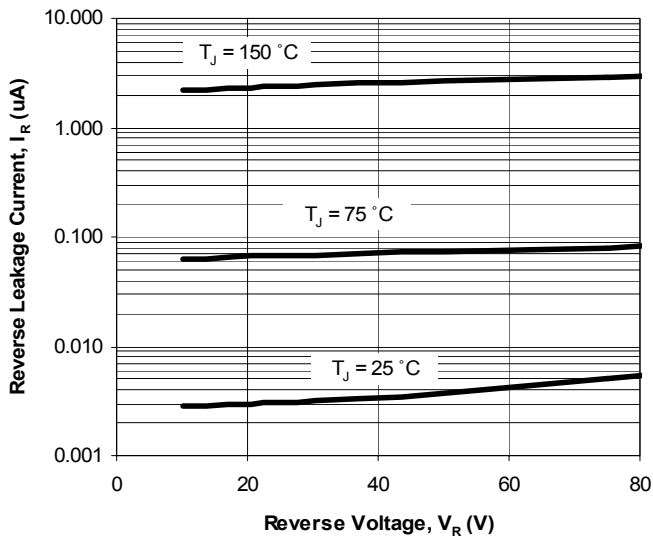


Fig. 2. Reverse Current vs. Reverse Voltage

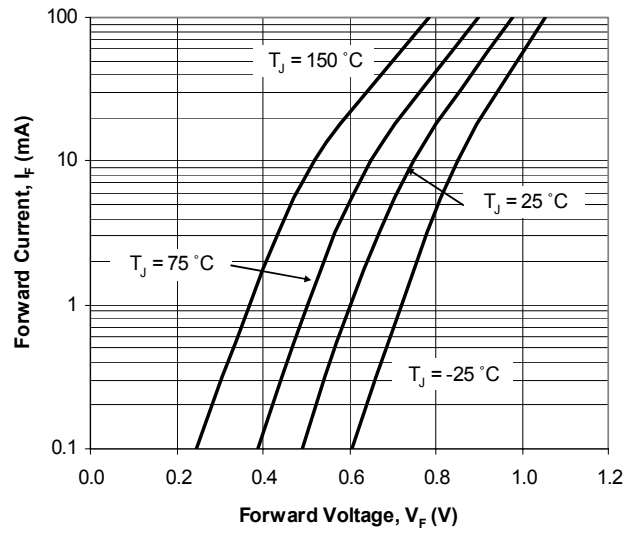


Fig. 3. Forward Current vs. Forward Voltage

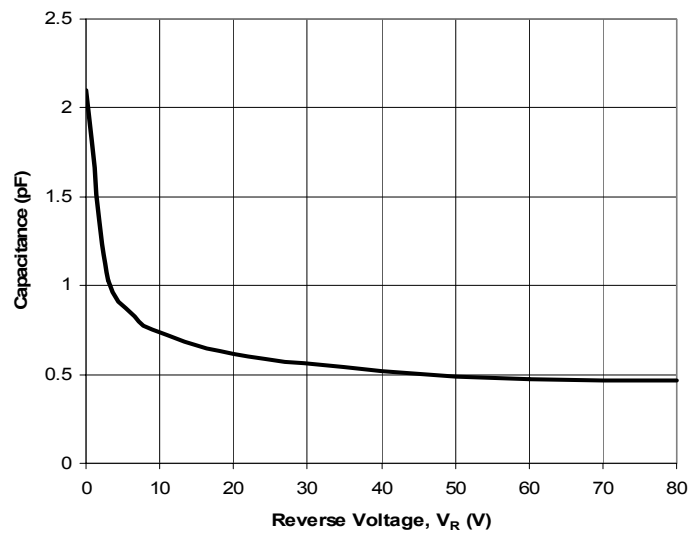


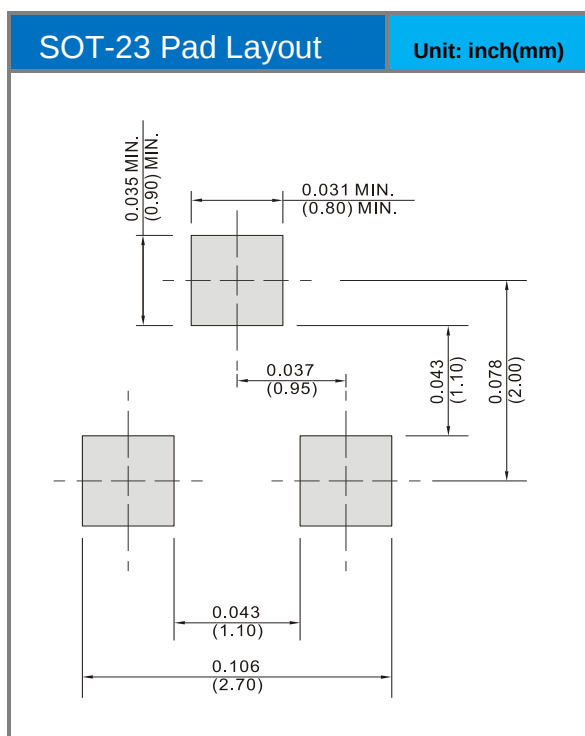
Fig. 4. Capacitance vs. Reverse Voltage

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MMBD914	SOT-23	3K pcs / 7" reel	T1
MMBD914	SOT-23	12K pcs / 13" reel	T1

Mounting Pad Layout



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